

Title (en)

MICROPUMP WITH CAM MECHANISM FOR AXIAL DISPLACEMENT OF ROTOR

Title (de)

MIKROPUMPE MIT NOCKENMECHANISMUS FÜR AXIALVERSCHIEBUNG EINES ROTORS

Title (fr)

MICROPOMPE COMPORTANT UN MÉCANISME À CAMES POUR LE DÉPLACEMENT AXIAL D'UN ROTOR

Publication

EP 3499034 B1 20210623 (EN)

Application

EP 17206732 A 20171212

Priority

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Abstract (en)

[origin: EP3499034A1] A pump including- a stator (4),- a rotor (6) slidably and rotatably mounted at least partially in the stator, the rotor comprising a first axial extension (24) having a first diameter (D1) and a second axial extension (26) having a second diameter (D2) greater than the first diameter,- a first valve (V1) formed by a first valve seal (18) mounted on the stator around the first axial extension, in conjunction with a first channel (42) in the rotor that is configured to allow liquid communication across the first valve seal when the first valve is in an open position,- a second valve (V2) formed by a second valve seal (20) mounted on the stator around the second axial extension, in conjunction with a second channel (44) in the rotor that is configured to allow liquid communication across the second valve seal when the second valve is in an open position,- a pump chamber (8) formed between the rotor and stator and between the first valve seal and second valve seal, and- a cam system comprising a cam track (22, 22') on one of the rotor or stator and a cam follower (36, 36') on the other of the rotor or stator for axially displacing the rotor relative to the stator as a function of the rotation of the rotor, the cam track comprising a valves-closed chamber-full section (28), a valves-closed chamber-empty section (30), an intake section (32) and an expel section (34). The expel section comprises an expel hold position (34b) defining an intermediate axial position between the valves-closed chamber-full section and valves-closed chamber-empty section for partial delivery of a pump cycle volume during the expel phase.

IPC 8 full level

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CPC (source: CN EP KR US)

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